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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,057	WILSON, DAVID	
	Examiner	Art Unit	
	COREY HALL	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-21,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-21,24 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 September 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 7, lines 2-4, filed 2/8/2011, with respect to claims 1, 4, 17, and 19 have been fully considered and are persuasive. The objection of claims 1, 4, 17, and 19 has been withdrawn.

2. Applicant's arguments, see page 7, lines 5-8, filed 2/8/2011, with respect to claims 1, 4-21, and 24-25 have been fully considered and are persuasive. The rejection of claims 1, 4-21, and 24-25 has been withdrawn.

3. Applicant's arguments filed 2/8/2011 have been fully considered but they are not persuasive. The declaration of Matthew Lloyd-Smith was considered but was not found persuasive because the opinion was not based on the references used in the Office action (see pages 1-2 of Declaration citing references relied upon).

4. On page 12, line 16-page 15, line 11 Applicant argues that none of Pietsch, McClaren or Hess in any way relate to drying of brown coal. That a person skilled in the art looking for a solution to a problem of drying pellets containing brown coal would not give any consideration whatsoever to known apparatus for the drying of grain, and therefore would not seek to locate documents such as Pietsch, McClaren and Hess. With regard to Pietsch, Applicant argues that it is fundamentally different to the present invention which requires plenums on external surfaces of the corrugated side walls, while Pietsch discloses an internal plenum. Additionally, that both legs of Pietsch are permeable, which would not work for drying coal containing pellets. Finally, that Pietsch has a very narrow width which would lead to significant degradation to the pellets. With regard to McClaren, Applicant argues that it has nothing to do with drying brown coal and

includes an internal plenum. With regard to Hess, Applicant argues that it relates to the unrelated field of heating and drying grains. Finally, that there would be no motivation to combine the references and that it would not make any sense to adopt single features from unrelated disclosures to solve a completely unrelated problem. The arguments were not found persuasive. The primary reference relied upon for the rejection is Wilson et al., a publication by the Applicant substantially disclosing the claimed invention for drying brown coal. Applicant's arguments with regard to Pietsch, McClaren and Hess are substantially that they relate to drying grains and therefore are nonanalogous art. In response to applicant's argument that Pietsch, McClaren and Hess are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Pietsch is reasonably pertinent to the particular problem which the Applicant was concerned because, as was explained in the Office action, Wilson et al. seeks to use perforated and substantially louvered shaped walls (Wilson et al., page 4, lines 3-4) and Pietsch teaches perforated and substantially louvered shaped walls. The plenums of Pietsch are not relevant to the rejection because Wilson et al. has its own plenums, indicates that perforated and substantially louvered shaped walls do work for drying coal containing pellets, and has a width suited for drying brown coal pellets. McClaren is reasonably pertinent to the particular problem which the Applicant was concerned because, as was explained in the Office action, Wilson et al. seeks to provide drying suited to pellets as they change during drying (Wilson et al., page 4, lines 9-10) to prevent damage to the pellets, provide a system that improves thermal

efficiencies (Wilson et al., page 6, lines 1-12), and provide a continuous flow of pellets to reduce pellet damage and maximize residence time (Wilson et al., page 4, lines 1-11) and McClaren teaches differing air stream properties to gradually temper the material being dried, reversing the direction of gas flow through plenums to recycle drying air and removing dried material which allows a continuous discharge of the dried material. Hess is reasonably pertinent to the particular problem which Applicant was concerned because, as was explained in the Office action, Wilson et al. suggests using three separate cells as shown in the top view of the dryer in figure 2 and Hess teaches dividing a dryer into a number of separate sections for individual control which would allow a more individualized crossflow of drying air, provide additional structural support, and provide lateral supporting members that could provide the three separate cells shown in the top view of the dryer in figure 2 of Wilson et al. Wilson et al. substantially discloses the claimed invention, including plenums on external surfaces of perforated and substantially louvered shaped walls, and where Pietsch, McClaren, and Hess are used there is generally already a suggestion in Wilson et al. for using what is taught by the references. Therefore, Wilson et al. in view of Pietsch, McClaren and Hess does substantially disclose the claimed invention and would be suitable for drying brown coal.

5. On page 15, lines 12-19, Applicant argues that the rejection is based upon improper hindsight reasoning. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge

gleaned only from the applicant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 4-19, 21, and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The amendment to claim 1, line 3 from "a charge of moisture and brown coal containing pellets" to "a charge of moisture and the brown coal containing pellets" renders claim 1 indefinite because it now seems to indicate that separate charges of "moisture" and "the brown coal containing pellets" are being supplied as opposed to a single charge of "moisture and brown coal containing pellets".

8. Claim 1 recites the limitation "the group" in line 17 and claim 17 recites the limitation "the open" in line 5. There are insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 4-9, 11-13, 17-19, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (Wilson, David et al., The Coldry Process, AIE 7th Australian Coal Science Conference, December 1996 provided by Applicant in IDS dated 6/25/2009) in view of Pietsch (US Patent No. 912,322 previously cited in notice of references cited mailed

11/9/2010) and further in view of McClaren (US Patent No. 4,242,806 previously cited in notice of references cited mailed 11/9/2010).

11. Regarding claims 1, 4-9, 11-13, 17-19, 21, and 24, Wilson et al. discloses a dryer (fig. 2) for drying pellets containing brown coal (page 3, line 3-page 4, line 13 describing a dryer for drying brown coal pellets), comprising at least one substantially vertical elongate container (fig. 2 and Figure A below) having: an open upper inlet (fig. 2 and Figure A below) for receiving a charge of moisture and the brown coal containing pellets (fig. 2 and Figure A below showing an open upper inlet of the dryer for receiving moist brown coal pellets, page 3, line 3-page 4, line 13 describing drying moist brown coal pellets); an open lower outlet (fig. 2 and Figure A below) for discharging dried brown coal containing pellets ("Dried pellets are extracted from the bottom" page 4, lines 1-2), whereby said pellets travel under the influence of gravity from said open upper inlet (fig. 2 and Figure A below) to said open lower outlet (fig. 2 and Figure A below) in a substantially continuous manner ("slowly descending mass of pellets" page 4, lines 1-13); two substantially vertical and opposed gas permeable walls (fig. 2 and Figure A below) through which a drying gas at temperatures from about 15°C to about 80°C (page 5, lines 13-23 describing drying at ambient temperatures or a few degrees higher where Applicant's specification discloses that the air temperature between about 15°C to about 80°C includes air at ambient temperature at page 10, lines 12-15) can pass to contact said pellets ("dried by means of a crossflow of air" page 3, line 31-page 4, line 13); . . . ; said dryer also comprising plenums (fig. 2 and Figure A below) on exterior surfaces of said gas permeable walls (fig. 2 and Figure A below), wherein the plenums (fig. 2 and Figure A below showing plenums divided into zones) are divided into zones . . . , wherein ingress openings and egress openings ("long vertical walls,

which are perforated" page 4, lines 1-4 describing a crossflow of air passing through the perforated walls) are respectively provided within said gas permeable walls (fig. 2 and Figure A below), wherein a plenum (fig. 2 and Figure A below showing plenums on the left side of the container where the plenums on the right show fans used to draw the drying air) covering said ingress openings comprises at least one inlet ("Drying air enters at one side, is drawn through the slowly descending mass of pellets, and discharged from the opposite side" page 4, lines 4-5 where it is implicit that the plenums on the left side would have at least one air inlet) and a plenum (fig. 2 and Figure A below showing plenums on the right side of the container) covering egress openings comprises at least one outlet ("discharged from the opposite side" page 4, lines 4-5 where it is implicit that the plenums on the right side would have at least one air outlet), wherein drying gas is drawn ("Drying air . . . is drawn through the slowly descending mass of pellets" page 4, lines 4-5) into the at least one inlet by a circulator (fig. 2 and Figure A below), wherein the circulator is an induced draft fan (fig. 2 and Figure A below, "Drying air . . . is drawn" page 4, lines 4-5), a drying plant (fig. 2, "plant layout in Fig. 2" page 4, lines 3-13) comprising: (a) a conditioning bed ("Pellet Conditioning Chamber and Elevator" fig. 2, page 3, lines 17-23 describing surface conditioning moist brown coal pellets in an elevating tray system where the trays would form a bed of pellets for conditioning) for subjecting moisture and brown coal containing pellets to surface conditioning; (b) at least one conveyer (fig. 2 and Figure A below) for conveying said surface conditioned brown coal containing pellets to the open upper inlet (fig. 2 and Figure A below) of a dryer according to claim 1; . . . , further comprising a compactor (fig. 2 and Figure A below) for production of brown coal containing compacted bodies (page 3, lines 3-16 describing compacting brown coal into pellets), wherein the

compactor (fig. 2 and Figure A below) comprises a mixing and conditioning device (fig. 2 and Figure A below and fig. 1 showing mixing and blending) and a pelletizer (fig. 2 and Figure A below and fig. 1 showing pelletizing), a method (fig. 1 showing a coldry process) of drying brown coal which comprises introducing brown coal fines (fig. 1 showing brown coal and "brown coal fines bunker" fig. 2) into the compactor (fig. 1 showing mixing and blending and pelletizing and fig. 2 and Figure A below showing the compactor) of the drying plant (fig. 2) according to claim 18, and wherein said plenums (fig. 2 and Figure A below) are located external to said substantially vertical elongate container (fig. 2 and Figure A below), except for wherein the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, of differing air stream properties, said air stream properties selected from the group consisting of velocity, flow direction, temperature and pressure, wherein the at least one outlet comprises at least one extract duct, wherein the direction of drying gas flow through the charge of pellets is reversed from one plenum zone to an adjacent plenum zone, having a height to width ratio of at least 3:1, having a height to width ratio of at least 5:1, having a height to width ratio of at least 10:1, (c) a collection surface for retrieving dried pellets from the dryer; and (d) a pellet remover for removing dried pellets from said collection surface. However, Pietsch teaches gas permeable walls (1, 2, fig. 1, page 1, lines 34-41 describing gas permeable walls 1 and 2) comprise a substantially continuous corrugated plate (figs. 1-3 showing the walls 1 and 2 as substantially continuous corrugated plates), wherein each corrugation comprises a supporting leg (fig. 3 showing a supporting leg at 2) and a permeable leg (fig. 3 showing a permeable leg with perforations 5 located below the supporting leg at 2) angled with respect to each other (fig. 3) in

order to provide the perforated and substantially louvered shaped walls required by Wilson et al. (Wilson et al., page 4, lines 3-4) and to provide constant circulation of air through the walls from the downward movement of the material (Pietsch, page 1, lines 64-76). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. reference, to include wherein the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, as suggested and taught by Pietsch, for the purpose of providing the perforated and substantially louvered shaped walls required by Wilson et al. and providing constant circulation of air through the walls from the downward movement of the material. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with Pietsch because Pietsch teaches that using continuous corrugated gas permeable walls can provide a constant circulation of air through the walls from the downward movement of the material and Wilson et al. could be similarly improved while additionally providing the perforated and substantially louvered shaped walls it requires, thus providing improved circulation of air and the type of walls required for effective drying of the brown coal.

McClaren teaches of differing air stream properties (col. 4, lines 19-23 describing plenums having drying air of different temperatures), said air stream properties selected from the group consisting of temperature (col. 4, lines 19-23 describing plenums having drying air of different temperatures), at least one outlet (figs. 1-2 showing an outlet 18 in lower plenum 17) comprises at least one extract duct (fig. 1 showing a duct 18, "duct 18" col. 2, line 48), a direction of drying gas flow through a charge of material is reversed from one plenum zone to an

adjacent plenum zone (fig. 2 showing drying gas flow reversing from one plenum zone at 16 to an adjacent plenum zone at 17), (c) a collection surface (39, fig. 3 showing collection surface 39 retrieving dried material from the dryer) for retrieving dried material from the dryer; and (d) a material remover (40, fig. 3) for removing dried material from said collection surface (39, fig. 3) in order to gradually temper the material being dried (col. 4, lines 24-42), to recycle drying air (col. 2, lines 48-58 and col. 4, lines 24-42), and to continuously discharge the dried material (col. 3, lines 42-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. in view of Pietsch reference, to include of differing air stream properties, said air stream properties selected from the group consisting of temperature, wherein the at least one outlet comprises at least one extract duct, wherein the direction of drying gas flow through the charge of pellets is reversed from one plenum zone to an adjacent plenum zone, (c) a collection surface for retrieving dried pellets from the dryer; and (d) a pellet remover for removing dried pellets from said collection surface, as suggested and taught by McClaren, for the purpose of gradually tempering the material being dried, recycling drying air, and continuously discharging the dried material. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with McClaren because McClaren teaches a packed bed dryer providing different air drying temperatures to gradually temper the material being dried which can prevent dried material from being damaged by high temperatures after its moisture has been substantially removed, recycling the drying air which reduces the waste of energy and continuously discharging the dried material so that the dryer can be continuously supplied with more material to be dried and the packed bed dryer of Wilson et al. could be similarly improved by providing

different air drying temperatures, recycling the drying air, and continuously discharging the dried material, thus providing different drying air temperatures suited to the pellets as they change during drying (Wilson et al., page 4, lines 9-10) to prevent damage to the pellets, reducing waste of energy to increase efficiency in a system intended to improve thermal efficiencies (Wilson et al., page 6, lines 1-12), and achieving a continuous flow of pellets to reduce pellet damage and maximize residence time (Wilson et al., page 4, lines 1-11).

It would have been an obvious matter of design choice to make a dryer for which the "Height, width and length can all be tailored to suit a particular application" (Wilson et al., page 4, lines 5-6) have a height to width ratio of at least 3:1, 5:1 or 10:1, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (Wilson, David et al. The Coldry Process, AIE 7th Australian Coal Science Conference, December 1996) in view of Pietsch (US Patent No. 912,322) and further in view of McClaren (US Patent No. 4,242,806) as applied to claim 5 above, and further in view of Johnson (US Patent No. 4,337,584 previously cited in notice of references cited mailed 2/19/2009).

13. In regards to claim 10, Wilson et al. in view of Pietsch and further in view of McClaren discloses the claimed invention, except for wherein a desiccator or refrigerator is provided in conjunction with the at least one outlet to recover water from drying gas exiting the dryer. However, Johnson teaches wherein a refrigerator (38, fig. 1, "evaporator 38 of a refrigeration system" col. 3, lines 16-17) is provided in conjunction with an at least one outlet (82, fig. 1) to

recover water (col. 3, lines 16-21 describing recovering water condensed by the refrigerator) from drying gas exiting a dryer (10, fig. 1) in order to dehumidify the recycled drying air (abstract, lines 14-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. in view of Pietsch and further in view of McClaren reference, to include wherein a refrigerator is provided in conjunction with the at least one outlet to recover water from drying gas exiting the dryer, as suggested and taught by Johnson, for the purpose of dehumidifying recycled drying air. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with Johnson because Johnson teaches dehumidifying its drying air to increase its capacity to dry and Wilson et al. could be similarly improved by dehumidifying its drying air, thus increasing the drying capacity of the air without having to increase the volume or temperature of the drying air in a system that achieves best results by slow drying at low temperatures (Wilson et al., page 3, line 25).

14. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (Wilson, David et al. The Coldry Process, AIE 7th Australian Coal Science Conference, December 1996) in view of Pietsch (US Patent No. 912,322) and further in view of McClaren (US Patent No. 4,242,806) as applied to claim 1 above, and further in view of Hess (US Patent No. 618,508 previously cited in notice of references cited mailed 11/9/2010).

15. In regards to claims 14-16, Wilson et al. in view of Pietsch and further in view of McClaren discloses the claimed invention, except for comprising lateral supporting members joining opposing gas permeable walls, wherein the supporting members are internal membrane walls that divide the dryer into a plurality of adjacent cells, and a cell of a dryer according to

claim 15. However, Hess teaches comprising lateral supporting members (2, fig. 4) joining opposing gas permeable walls (figs. 2 and 4 at C showing opposing gas permeable walls of container C), wherein the supporting members (2, fig. 4 showing internal membrane walls 2 dividing the dryer into adjacent cells) are internal membrane walls that divide the dryer into a plurality of adjacent cells (fig. 4 at 1 showing a plurality of cells at 1), and a cell (fig. 4 at 1) of a dryer according to claim 15 in order to divide the dryer into a number of separate sections for individual control (page 3, lines 6-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. in view of Pietsch and further in view of McClaren reference, to include comprising lateral supporting members joining opposing gas permeable walls, wherein the supporting members are internal membrane walls that divide the dryer into a plurality of adjacent cells, and a cell of a dryer according to claim 15, as suggested and taught by Hess, for the purpose of dividing the dryer into a number of separate sections for individual control. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with Hess because Hess teaches a packed bed dryer having lateral supporting members joining opposing gas permeable walls to divide the dryer into separate sections or cells for individual control and the packed bed dryer of Wilson et al. could be similarly improved by having lateral supporting members joining its gas permeable walls to divide it into separate sections or cells, thus allowing the individual plenum sections of Wilson et al. to provide a more individualized crossflow of drying air through the dryer to optimize drying conditions for the coal, providing additional structural support for the dryer, and providing lateral supporting

members that could provide the three separate cells shown in the top view of the dryer in figure 2 of Wilson et al.

16. Claims 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (Wilson, David et al. The Coldry Process, AIE 7th Australian Coal Science Conference, December 1996) in view of Pietsch (US Patent No. 912,322) and further in view of McClaren (US Patent No. 4,242,806) and further in view of Hess (US Patent No. 618,508).

17. Regarding claims 20 and 25, Wilson et al. discloses a dryer (fig. 2) for drying pellets containing brown coal (page 3, line 3-page 4, line 13 describing a dryer for drying brown coal pellets) comprising at least one substantially vertical elongate container (fig. 2 and Figure A below) having: an open upper inlet (fig. 2 and Figure A below) for receiving a charge of brown coal pellets (fig. 2 and Figure A below showing an open upper inlet of the dryer for receiving moist brown coal pellets, page 3, line 3-page 4, line 13 describing drying moist brown coal pellets); an open lower outlet (fig. 2 and Figure A below) for discharging dried pellets ("Dried pellets are extracted from the bottom" page 4, lines 1-2), whereby said pellets travel under the influence of gravity from said inlet (fig. 2 and Figure A below) to said outlet (fig. 2 and Figure A below) in a substantially continuous manner ("slowly descending mass of pellets" page 4, lines 1-13); two opposing substantially vertical gas permeable walls (fig. 2 and Figure A below) through which a drying gas at temperatures of from about 15°C to about 80°C (page 5, lines 13-23 describing drying at ambient temperatures or a few degrees higher where Applicant's specification discloses that the air temperature between about 15°C to about 80°C includes air at ambient temperature at page 10, lines 12-15) can pass to contact said pellets ("dried by means of a crossflow of air" page 3, line 31-page 4, line 13); . . . ; said dryer also comprising plenums (fig.

2 and Figure A below) on external surfaces of the gas permeable walls (fig. 2 and Figure A below), wherein the plenums (fig. 2 and Figure A below showing plenums divided into zones) are divided into zones . . . , and wherein said plenums (fig. 2 and Figure A below) are located external to said substantially vertical elongate container (fig. 2 and Figure A below), except for wherein the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, of differing air stream properties and wherein the direction of drying gas flow through the charge of brown coal containing pellets is reversed from one plenum zone to an adjacent plenum zone; the dryer comprising lateral internal membrane walls joining opposing gas permeable walls that divide the dryer into a plurality of adjacent cells. However, Pietsch teaches gas permeable walls (1, 2, fig. 1, page 1, lines 34-41 describing gas permeable walls 1 and 2) comprise a substantially continuous corrugated plate (figs. 1-3 showing the walls 1 and 2 as substantially continuous corrugated plates), wherein each corrugation comprises a supporting leg (fig. 3 showing a supporting leg at 2) and a permeable leg (fig. 3 showing a permeable leg with perforations 5 located below the supporting leg at 2) angled with respect to each other (fig. 3) in order to provide the perforated and substantially louvered shaped walls required by Wilson et al. (Wilson et al., page 4, lines 3-4) and to provide constant circulation of air through the walls from the downward movement of the material (Pietsch, page 1, lines 64-76). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. reference, to include wherein the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, as suggested and taught by Pietsch, for the

purpose of providing the perforated and substantially louvered shaped walls required by Wilson et al. and providing constant circulation of air through the walls from the downward movement of the material. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with Pietsch because Pietsch teaches that using continuous corrugated gas permeable walls can provide a constant circulation of air through the walls from the downward movement of the material and Wilson et al. could be similarly improved while additionally providing the perforated and substantially louvered shaped walls it requires, thus providing improved circulation of air and the type of walls required for effective drying of the brown coal.

McClaren teaches of differing air stream properties (col. 4, lines 19-23 describing plenums having drying air of different temperatures) and wherein a direction of drying gas flow through the charge of material is reversed from one plenum zone to an adjacent plenum zone (fig. 2 showing drying gas flow reversing from one plenum zone at 16 to an adjacent plenum zone at 17) in order to gradually temper the material being dried (col. 4, lines 24-42) and to recycle drying air (col. 4, lines 24-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. in view of Pietsch reference, to include of differing air stream properties and wherein the direction of drying gas flow through the charge of brown coal containing pellets is reversed from one plenum zone to an adjacent plenum zone, as suggested and taught by McClaren, for the purpose of gradually tempering the material being dried and recycling drying air. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with McClaren because McClaren teaches a packed bed

dryer providing different air drying temperatures to gradually temper the material being dried which can prevent dried material from being damaged by high temperatures after its moisture has been substantially removed and recycling the drying air which reduces the waste of energy and the packed bed dryer of Wilson et al. could be similarly improved by providing different air drying temperatures and recycling the drying air, thus providing different drying air temperatures suited to the pellets as they change during drying (Wilson et al., page 4, lines 9-10) to prevent damage to the pellets and reducing waste of energy to increase efficiency in a system intended to improve thermal efficiencies (Wilson et al., page 6, lines 1-12).

Hess teaches a dryer (title) comprising lateral internal membrane walls (2, fig. 4) joining opposing gas permeable walls (figs. 2 and 4 at C showing opposing gas permeable walls of container C) that divide the dryer into a plurality of adjacent cells (fig. 4 at 1 showing a plurality of cells at 1) in order to divide the dryer into a number of separate sections for individual control (page 3, lines 6-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Wilson et al. in view of Pietsch and further in view of McClaren reference, to include the dryer comprising lateral internal membrane walls joining opposing gas permeable walls that divide the dryer into a plurality of adjacent cells, as suggested and taught by Hess, for the purpose of dividing the dryer into a number of separate sections for individual control. The Applicant is merely combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Wilson et al. with Hess because Hess teaches a packed bed dryer having lateral internal membrane walls joining opposing gas permeable walls to divide the dryer into separate sections or cells for individual control and the packed bed dryer of Wilson et al. could be similarly improved by having lateral

internal membrane walls joining its gas permeable walls to divide it into separate sections or cells, thus allowing the individual plenum sections of Wilson et al. to provide a more individualized crossflow of drying air through the dryer to optimize drying conditions for the coal, providing additional structural support for the dryer, and providing lateral internal walls that could provide the three separate cells shown in the top view of the dryer in figure 2 of Wilson et al.

Figure A.

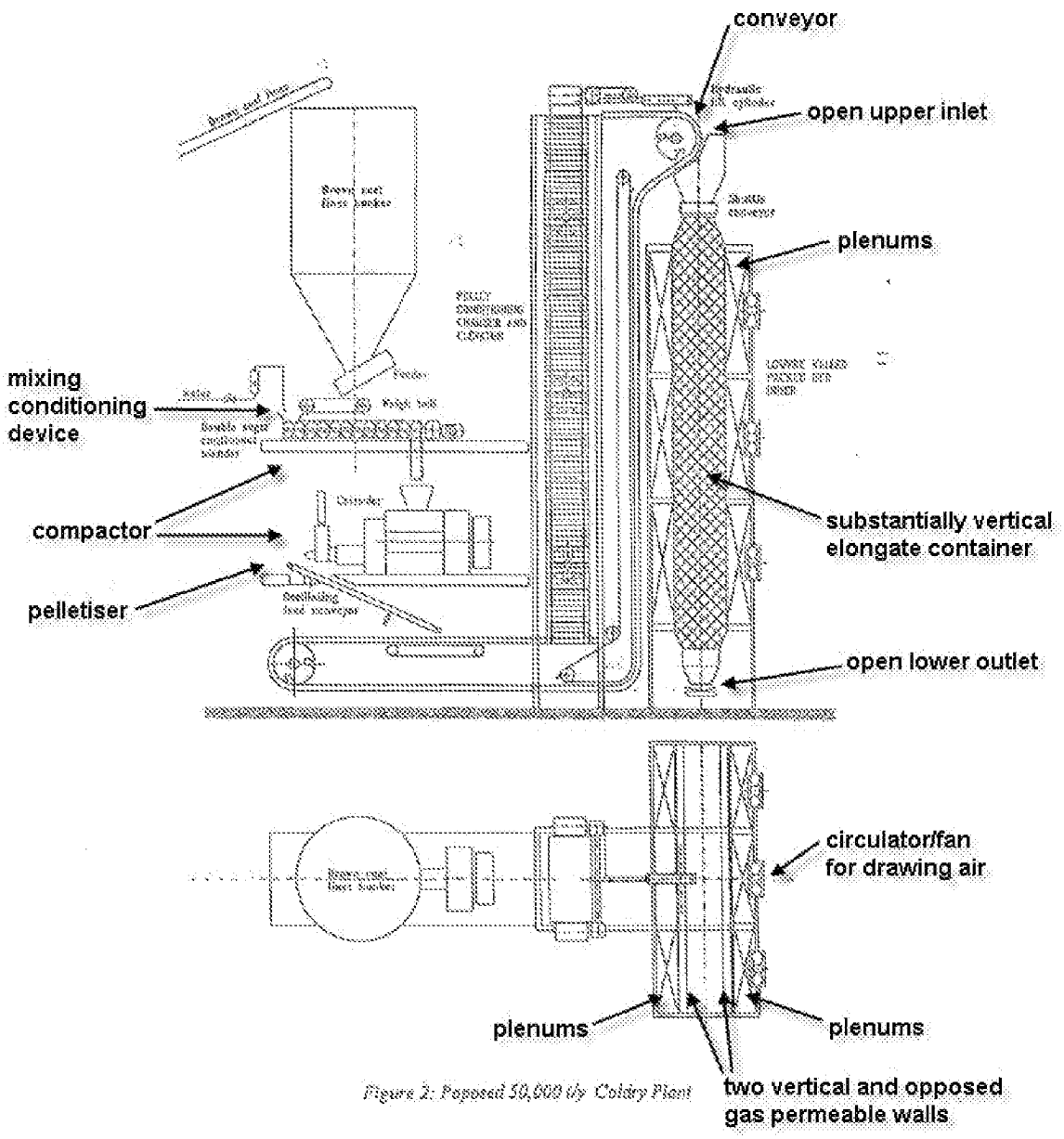

Figure 2: Proposed 50,000 t/y Coldry Plant

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COREY HALL whose telephone number is (571)270-7833. The examiner can normally be reached on Monday - Friday, 9AM to 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on (571)272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Corey Hall/
Examiner, Art Unit 3743

/Kenneth B Rinehart/
Supervisory Patent Examiner, Art Unit 3743